

How Text Boxes Affect Reader Comprehension

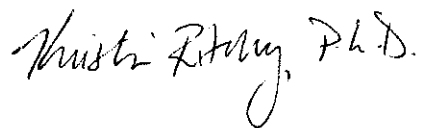
An Honors Thesis (HONRS 499)

by

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A handwritten signature in black ink that reads "Kristin Ritchey, Ph.D." The signature is written in a cursive, flowing style.

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Abstract

This study examined how text boxes affect participant understanding of text. A text box is operationally defined as a portion of text outlined by a box and thus separated from the body of the text. Participants read texts that contained a topic discussed in a text box and/or integrated in with the body of the text. Results indicated a significant effect of order in which participants received the texts, but not a significant effect of text box presence. This suggests that text boxes are not an effective organizational text signal.

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Rationale

I chose to conduct this study for my thesis because it was a topic of research that interested me and that I found personally relevant. I was curious about whether the text boxes in many of my textbooks were effective. I also wanted to conduct my own research study to better prepare myself for graduate school and the research that it will entail.

The purpose of my project is to broaden the research on text arrangement and comprehension, as well as inform others about the findings. My target audience is the research community and anyone interested in the effects and methods of my study. I would like to contribute my results to the present body of research that will hopefully impact the use of text boxes in college textbooks, as well as influence the overall application of text organization.

I think my research will be of interest to Honors College students because it examines text boxes, which they likely encounter on a regular basis. My study is also a chance for students to learn about the research process and to gain understanding about how to interpret research results. In addition, professors can benefit from my study by learning more about how students read and comprehend textbooks. Professors can also use the results of this study to formulate more effective college textbooks, while publishers might also consider these results when producing college textbooks.

How Text Boxes Affect Reader Comprehension

An average college textbook consists of approximately 400 pages of text and about 150,000 words. Students obviously cannot remember everything discussed in the textbook, so how do they focus on the key information? (Reder & Anderson, 1980). Knowing that more information is included in textbooks than can be tested or remembered, students identify information that is important and likely to be tested. They then adjust their reading efforts and attention according to the level of importance they place on the various pieces of information in the text (Goetz, Alexander, & Schallert, 1987).

Research has shown that text information that is signaled in some way is remembered better than text information that is not signaled (Kardash & Noel, 2000). Meyer and McConkie (1973) suggested that better memory of significant parts of the text depends on the structure of the text rather than on one's perception of importance (Reder & Anderson, 1980). Lorch, Lorch, Ritchey, McGovern, & Coleman (2001) furthered their logic by asserting that organizational signals in text affect recall of text content and lead to more text topics being represented in recall. Therefore, it is important for textbook authors to structure the text in a way that facilitates the communication of important facts and concepts.

There are two main types of text signals: organizational and typographical. According to Lorch (1985), organizational signals are any writing devices that emphasize certain topics of the text and their organization without changing the content or meaning of the overall text. Organizational signals highlight the organization of a text via headings, overviews, and summaries. Essentially, these organizational signals facilitate reader comprehension and recall of main points within a text (Lorch, 1989).

A great deal of research has been conducted on organizational signals, such as headings, overviews, and summaries. The majority of research has shown that information presented with some type of organizational signal is remembered better than information presented without an organizational signal (Kardash & Noel, 2000).

Headings, a type of organizational text signal, are defined as statements that divide a text into smaller units of related information (Krug, George, Hannon, & Glover, 1989). Headings modestly aid memory of text and enhance the search for specific information that is related to the headings. Reader memory is particularly increased for information that is relevant to the headings used in the text (Lorch, 1989). Headings have also been found to enhance reader recall of text information (Krug et al., 1989).

The use of organizational signals like summaries and overviews enhance reader memory for recall tasks. While these two signals produce similar effects, they differ in how they generate effects because they are located in different regions of a text. Summaries appear at the end of text to consolidate ideas, but overviews are placed at the beginning of text to identify topics and their organization for the reader. Thus, overviews facilitate an individual's reading better than summaries (Lorch, 1989).

Next, typographical signals (such as underlining, bolding, italics, and color variations) are used to direct reader attention to particular words, phrases, or sub-topics, and thus tend to improve comprehension and memory of specific content of a text. Typographical cues improve memory for signaled text, but they also tend to inhibit or have no effect on memory for unsignaled text. Typographical cues not only affect memory, but they also enhance reader comprehension and search skills. Many of the typographical are discussed as one category because research has not suggested any significant differences in their effects (Lorch, 1989).

In addition, a study by Lorch, Lorch, and Inman (1993) suggested that the use of headings, overviews, and summaries increased recall for important topics and for subordinate content linked with those topics. However, little is known about how recognition, rather than recall, is affected by organizational signals (Kardash & Noel, 2000).

Text signaling devices have varying effects on the processing and recall of text. However, text boxes are a potential text signal that has been largely neglected by previous research. For the purposes of this study, a text box is defined as a portion of text outlined by a box and thus separated from the body of the text.

The classification of text boxes as an organizational or typographical signal is an unclear area because text boxes do not fall neatly into either category. While text boxes possess some organizational aspects, such as indicating that the information within the box is a separate topic, they differ from other organizational signals in that they utilize a visual barrier, rather than words, to produce an effect. Yet, a text box also resembles a typographical cue in that it directs reader attention to a particular sub-topic. Despite the ambiguity and lack of precise classification of text boxes, it seems that they should be regarded as a type of organizational signal because the visual barrier of the box serves to emphasize a certain topic and enhance reader recall and comprehension of a text. Text boxes seem to be an attempt to organize a text in a way that facilitates the ability of the reader to follow and understand the text.

The effects of text boxes are largely unknown. It might be that the signal of the text box elicits better subject memory and comprehension of the information presented within the text box. Information found in a text box may reinforce material from the rest of the text and thus enhance overall reader comprehension, or text boxes might inhibit memory or comprehension of the rest of the text.

Another possibility might be that subjects do not pay attention to text boxes because they are considered somewhat unimportant additions to the body of text, which would inhibit reader comprehension. This may be especially true in the college population because students are required to read and comprehend large amounts of texts in limited time spans. Thus, the present study is intended to gather preliminary information about the nature of and effects of text box use in college textbooks. It will examine subject recognition of information when it is set off in a text box and when it is integrated in with the body of the text.

Method

Participants

The current study consisted of 128 students enrolled in Introduction to Psychology at Ball State University. The participant population included both males and females that were 18 years old or older. There were no limitations regarding other factors such as race, ethnicity, or class standing. Participants were systematically recruited through the Introduction to Psychology web site, where they could choose the date and time of their participation from the choices listed.

Materials

Participants were given two texts to read; each of which was typed, single-spaced, and approximately four pages in length. One text discussed issues in counseling psychology, including intentionality in counseling, cultural intentionality in counseling, intentional competence, attending behavior in interviews, and the usefulness of silence in interviews. In version A of this text, an additional topic of multicultural considerations in counseling was included in a text box on the third page (See Appendix A). (For this study, a text box is defined as a portion of text outlined in a box and thus separated from the body of the text.) In version B of the counseling psychology text, the information about multicultural considerations in

counseling was integrated into the body of the text rather than set off in a text box (See Appendix B). Thus, all participants received either version A or B of the counseling psychology text.

The other text addressed economics and included information about the scope of microeconomic theory, the nature and role of theory, markets, market analysis and real versus nominal prices, and opportunity cost. Version A of this text contained additional information on assumptions about market participants in a text box on page three of the text (See Appendix C). Version B included the same information regarding assumptions about market participants except it was integrated in with the body of the text (See Appendix D). All participants received either version A or B of the economics text.

The counseling psychology text was drawn from Ivey and Ivey's (2003) *Intentional Interviewing and Counseling: Facilitating Client Development in a Multicultural Society*. The economics text was drawn from Browning and Zupan's (2002) *Microeconomics: Theory & Applications* and Parkin's (1996) *Microeconomics*.

Both the economics and counseling psychology texts were divided into five sections with headings. The texts were constructed to mimic college introductory level texts in terms of topics discussed and readability level. Version A of the counseling psychology and economics texts included a text box of the same size, in the same location (at the top of page 3), and with the same number of paragraphs (5 paragraphs). The economics and counseling psychology texts were made as similar as possible to facilitate the ability to generalize results.

After reading version A or B of the counseling psychology text and version A or B of the economics text, participants were given a paper and pencil comprehension test on each text (See Appendix E & Appendix F). Both comprehension tests consisted of nine multiple choice questions, with three questions specifically drawn from the material set off in a text box or

integrated in with the body of the text. The questions in the multiple-choice tests were designed to assess basic comprehension and attention to the texts.

Upon completion of the comprehension tests, participants were given a survey regarding their experiences with the study (See Appendix G). The survey consisted of two questions with yes or no responses and a chance to explain their answer. One question assessed if participants usually read the text boxes in their textbooks for classes and their reasoning behind their actions. The second question asked if the participants read the text boxes in the current study and why they did or did not read them. The survey also included an attached page that showed an example of a text box in order to ensure that participants clearly understood what a text box was.

Design

This study was a 2 x 4 repeated measures design. There were two orders in which texts were presented (counseling psychology first or economics first) and four combinations of text boxes in those texts (text box/text box; no text box/no text box; text box/no text box; and no text box/text box).

Procedure

This study was conducted in various rooms in the Teachers College at Ball State University, and the sessions consisted of up to twenty participants. The sessions were scheduled to last up to one hour, but it generally took participants 30-45 minutes to complete their tasks. Participants signed up for the study by visiting the Introduction to Psychology course web site and selecting a time that was convenient for them. Participants were therefore assigned at random to the conditions of this study.

After participants had read and signed the informed consent form, they were given a version of the economics text and a version of the counseling psychology text in a closed

envelope. At this time, participants were also given a separate closed envelope containing two comprehension tests, one over the economics text and the other over the counseling psychology text. They were instructed not to open the second envelope until they had completed reading the two texts and placed them back in their original envelope.

Participants were randomly assigned to one of eight conditions. They were specifically instructed to read the texts in the order in which they were placed in the envelope. To avoid confusion, the texts were also numbered so participants would know which to read first. After participants read the texts and placed them back in their original envelope, they took the comprehension tests out of the other envelope and completed them.

Upon completion of the tests, participants placed the tests back in the envelope and closed it. They then raised their hand to attract the attention of the investigator, who presented them with a pencil and paper survey regarding their experiences with the study. The participants completed the pencil and paper survey and then returned it, along with the envelopes containing their texts and tests, to the investigator. The investigator then gave the participants a debriefing document, thanked them for their time, and stated that they would receive one hour of research credit for their participation. This research credit could be used by participants to fulfill the research requirement for their Introduction to Psychology course at Ball State University.

Results

This study was designed to examine the nature of and effects of text boxes in college textbooks. Participant recognition of information when it is placed within a text box and when it is integrated in with the body of the text was tested with multiple choice comprehension tests.

Scores on the multiple choice comprehension tests were determined by assigning one point for every question answered correctly. Each participant earned two scores: one reflecting

how many of the three questions covering information from the text box they answered correctly, and one reflecting how many of the nine total questions they answered correctly. Therefore, overall scores could range from a minimum score of zero to a maximum possible score of nine, and scores over the text box information could range from a minimum score of zero to a maximum possible score of three. Survey responses were qualitative and thus not included in the following analyses. However, survey responses will be summarized and discussed at the end of this section.

There was a significant effect of text order, with $F(5, 115) = 3.56, p = .005$. However, there was not a significant effect of text boxes, with $F(15, 351) = .669, p = .573$. Planned comparisons showed that the effects of text boxes differed according to the text in which they appeared. For the text box questions over the counseling psychology text, text order had an effect, with $t(125) = 2.56, p = .01$. For the text box questions over the economics text, text order did not have an effect, $t(125) = .387, p = .699$. For the remaining multiple choice questions over the counseling psychology text, text order had an effect, with $t(125) = 3.94, p = .001$. For the remaining multiple choice questions over the economics text, text order did not have an effect, with $t(125) = .43, p = .67$.

These results indicate that while the order in which texts were presented had an impact on participants, the presence of or lack of text boxes did not have a significant impact on participant comprehension or memory. They also suggest that participants exhibited better recognition of the information when they read the counseling psychology text first.

Survey results demonstrated that, of those participants who received at least one text that contained a text box, 28% did not read the text boxes and 72% did read the text boxes. This suggests the presence of demand effects because participants often read the text boxes only

because they thought the experiment demanded it. They also tended to report only reading the text boxes because they thought that the experiment might involve questions over the text box material.

However, many participants stated that they do not usually read the text boxes in their regular courses at Ball State University. They reported ignoring text boxes under normal circumstances beyond this experiment. For example, 64% said that they do not generally read text boxes in their texts and 23% said they only sometimes read the text boxes, while only 13% said they almost always read the text boxes. This demonstrates a general trend of students not reading text boxes or rarely choosing to do so. Some of the most common reasons participants reported sometimes choosing to read the text boxes were if it was a summary, if it contained vocabulary words, if it contained information they would be tested on, and if the topic was especially interesting.

The surveys completed by participants also garnered interesting anecdotal results. For the question, *Did you read the text boxes in the texts used in this experiment? Why or why not?*, the following responses were common and representative of the group:

- 1) “Yes, since this was not a regular class, I didn’t know what kind of questions to expect; therefore, I read the boxes in case the information was important.”
- 2) “Yes, it was an experiment and I thought I needed to.”
- 3) “Yes, because I thought there would possibly be questions over the content on the quiz.”
- 4) “No, because they are usually placed in the middle of other reading, stopping to read the boxes would make me lose my train of thought of what I am currently reading.”
- 5) “No, I feel it is separate from the reading and not as relevant.”

The second survey question, *In general, do you usually read the text boxes in your text books?*, generated many responses similar to the following:

- 1) “Yes, I read them in most of my textbooks because they usually help clarify and summarize the information. Some professors take test questions from the text boxes.”
- 2) “Yes, most of them offer additional information or added views on a subject.”
- 3) “No, because I feel like if it’s important it would be with the rest of the reading or the teacher would tell you about it.”
- 4) “No, they seem like ‘added’ information that is beneficial, yet not necessary to understand the context in the book.”
- 5) “No, they seem to interrupt the reading and reiterate something that has already been said.”
- 6) “No, because of laziness or I don’t have time.”

Overall, these survey responses provided valuable insight into the reading habits of college readers. The surveys indicated that most college students do not read the text boxes in their textbooks, which suggests that text boxes are not an effective way to organize text and thus calls into question their usefulness.

Discussion

First, the order in which texts were presented produced an unexpected significant effect. Performance on the questions drawn from the text boxes and from the main text increased when the counseling psychology text was read first. This effect may have occurred because the counseling psychology text was easier or more interesting. However, the differences between the counseling psychology and economics texts did not result in significant effects regarding the

presence of text boxes across conditions. There was not a significant effect of the presence of a text box across all texts and conditions.

Next, the current study suggests that text boxes are not an effective text signal because there were not significant differences in participant performance on comprehension tests when text boxes were present and when text boxes were excluded. Information that was presented in a text box or integrated in with the body of the text was recognized with similar accuracy by participants, which leads to the assumption that the text boxes did not facilitate reader comprehension or recognition as they are designed to do.

While text boxes are often used to highlight specific and significant information, it seems that college readers may interpret text boxes as being of little importance. As reported in the anecdotal results, many participants viewed text boxes as an interruption of the text and/or as unimportant additional information. Participants also reported failing to read text boxes in their general college courses because of a lack of time or laziness.

The apparent inattention to text boxes by college students seems to be hindering the overall effectiveness of college textbooks. Publishers and authors are organizing texts with text boxes, but students are not responding to or benefiting from text boxes. Thus, the results of this study strongly suggest that authors and publishers place important information within the main body of a text and either avoid the use of text boxes or reserve text boxes for additional and/or less important information.

Limitations and Directions for Future Research

The present study was limited by its use of students enrolled in the Introduction to Psychology course at Ball State University. This inclusion criterion likely excluded many upperclassmen and nontraditional students, who may have contributed different results and

varying perspectives on text boxes. Therefore, future studies on text boxes with different sample populations (e.g. upperclassmen undergraduates or graduate students) would likely be beneficial.

Next, the current study suffered due to demand effects because many participants read the text boxes simply because they knew they were part of an experiment. Many participants noted that they read the text boxes in the experiment but that they did not usually read the textboxes in texts for their regular classes. It is possible that scores on the comprehension tests were consistent across conditions only because most participants read the text boxes as a result of demand effects. However, under more realistic circumstances, such as reading a long chapter for a college course, participants may have been more likely to skip over and ignore the text boxes. Thus, the general inability to perfectly recreate students' real-life reading experiences caused external validity to suffer and could have affected the results of the study.

To enhance future studies, researchers should consider making the procedure more similar to actual classroom situations. For example, longer texts might better discriminate between whether most readers attend to the text boxes or not. It would also be interesting to conduct a study with an actual textbook in an existing college course. The researcher could have the professor include additional questions on student tests to assess if students had read and remembered information presented in text boxes. This approach would garner more realistic and representative results on the effectiveness of text boxes in college textbooks.

A future study should also examine the effects of text boxes when cues are placed in the body of text that direct the reader to read a text box (e.g. See box 1.1). The inclusion of such cues might enhance the effectiveness of text boxes by emphasizing their presence and their relevance to the topic.

In conclusion, this study has implications for theoretical and applied knowledge concerning the use of text boxes in college textbooks. It has contributed to the body of research on text signals and will hopefully generate further research regarding the effects of text boxes on reader recognition and memory. In doing so, further research can then be used to produce more effective organization within college textbooks, which could potentially enhance the education of college students.

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Appendix A

Counseling Psychology

Intentionality in Counseling

Facilitating client development is a key aspect of counseling that requires counselors to blend their personal style of helping with their acquired interviewing skills. Intentionality and cultural intentionality encourages the counselor to be his or her self, but also emphasizes that reaching a wide variety of clients requires flexibility and a constant willingness to learn new ways of interacting with clients.

Clients come to counselors with multiple issues and concerns. The counselor has many possible methods of action, but is important that he or she listens first and begins problem solving later. How you listen and respond may be more important than attempting to solve the client's problem right away.

Beginning interviewers are often eager to find the "right" answer for the client. In fact, they are often so eager that they often give quick patch-up advice that is inappropriate. For example, it is possible that cultural factors such as ethnicity, race, gender, lifestyle, or religious orientation may unknowingly determine the counselor's response and plan of treatment for the client, which can have detrimental effects.

Intentional interviewing is concerned not with which single response is correct, but with how many potential responses may be helpful. Intentionality is a core goal of effective interviewing within the counseling profession.

Intentionality is acting with a sense of capability and deciding from among a range of alternative actions. The intentional individual has more than one action, thought, or behavior to choose from in responding to changing life situations. The intentional individual can generate alternatives in a given situation and approach a problem from different vantage points, using a variety of skills and personal qualities, adapting styles to suit different individuals and cultures.

The culturally intentional interviewer remembers a basic rule of helping: if something doesn't work, don't try more of the same—try something different!

Cultural Intentionality in Counseling

One of the critical issues in interviewing is that the same skills may have different effects on people from varying cultural backgrounds. Intentional interviewing requires an awareness that cultural groups each have different patterns of communication. Eye contact patterns differ, for example. In the U.S. culture, middle-class patterns call for rather direct eye contact, but in some cultural groups direct eye contact is considered rude and intrusive. Some find the rapid-fire questioning techniques of many North Americans offensive. Many Spanish-speaking groups have more varied vocal tones and sometimes a more rapid speech rate than do English-speaking people.

It is also important to remember that the word culture can be defined in many ways. Religion, class, ethnic background (for example, Irish American and African American), gender, and lifestyle differences, as well as the degree of a client's developmental or physical disability, also represent cultural differences. There is also a youth culture, a culture of those facing imminent death through AIDS or cancer, and a culture of the aging. In effect, any group that differs from the "mainstream" of society can be considered a subculture. All of us at times are thus part of many cultures that require a unique awareness of the group experience. In fact, increasingly, many people suggest that diversity is what constitutes the mainstream. This may suggest that respecting and honoring our differences is what will bring us together as one people.

Furthermore, individuals differ as much as or more than cultures. Counselors need to attune their responses to the unique human being that is before them. Lack of intentionality

shows in the interview when the counselor persists in using only one skill, one definition of the problem, or one theory of interviewing, even when that theory isn't working.

Intentional Competence

Closely allied to intentionality is intentional competence, which is associated with predictability and the anticipated consequences of what a counselor says in a session with a client. Intentional competence adds another dimension to many of the skills employed by counselors.

Some examples of anticipated consequences are: when asking an open-ended question, the anticipated result is that the client will talk more in-depth about a topic; when reflecting a client's feeling, expect clients to acknowledge and deal with their feelings more fully; and when confronting a client about discrepancies, the consequence is likely to be that the client will seek to resolve such issues.

Even though counselors can make intentional predictions about what will happen as a result of using certain skills, it is important to remember that clients may vary in their responses to the same skills. A counselor may ask an open-ended question and find that some clients simply do not want to answer completely. A counselor may reflect a client's feelings but learn that the client is not yet ready to explore his or her emotions. In short, the intentional prediction may not always "work."

Intentionality, as discussed earlier, stresses the importance of having more than one action, thought, or behavior to choose from in changing life situations. True intentional competence demands more than predictability; it also requires flexibility, the ability to change direction and skills, and the capacity to be with the client in new ways.

Attending Behavior in the Interview:

The Three V's and B: Visuals, Vocals, Verbals, and Body Language

Utilizing the skills of attending behavior is critical to counselor-client interaction. The counselor needs to use the "three V's of attending plus attentive body language (+B)." These skills are very effective when used within an individually and culturally appropriate framework.

Cultural differences in eye contact abound. Direct eye contact is considered a sign of interest in European-North American middle-class culture. However, even in that culture, a person often maintains more eye contact while listening and less while talking. Furthermore, when a client is uncomfortable talking about a topic, it may at times be better for the counselor to avoid eye contact. Research indicates that some African Americans in the U.S. may have reverse patterns; that is, they may look more when talking and slightly less when listening. Among some Native American and Latin groups, eye contact by the youth is a sign of disrespect. Imagine the problems this may cause if a teacher or counselor says to a youth, "Look at me!" when this directly contradicts basic cultural values. Some cultural groups (for instance, some Native American, Inuit, or Aboriginal Australian groups), generally avoid eye contact, especially when talking about serious subjects.

Counselors need to notice breaks in eye contact as well. Clients often tend to look away when thinking carefully or discussing topics that particularly distress them. Also, counselors can use eye contact breaks to indicate to clients whether a topic is appropriate or if they are dwelling too much on a particular topic. When an issue is especially interesting to clients, their pupils will often dilate. On the other hand, if a topic is uncomfortable or boring their pupils may contract.

The voice is an instrument that communicates much of a person's feelings he or she might have toward another person or situation. Changes in pitch, volume, or speech rate convey similar things that changes in eye contact or body language do. It is important to remember that different people will respond to the same voice in varying ways. This is because people differ in their reactions to the same stimulus. While some may find a voice boring, still others may

Box 1.1 Multicultural Considerations

Attending behaviors (visuals, vocals, verbals, and body language) all may require modification when working with individuals from different cultures. For example, when working with people who are disabled, counselors must focus on the person, not the disability. Thus, think of a person with hearing loss rather than someone who is "hearing impaired," a person with AIDS rather than an AIDS victim, a person with a physical disability rather than a "physically handicapped" person. So-called handicaps are often societal and environmental rather than personal.

For example, eye contact is so central to the sighted that counselors often find it very demanding to work with clients who are blind or partially sighted. Some of these clients may not look at their counselor as they speak, so such clients are usually more aware of vocal tone. People who are blind from birth may have unique patterns of body language. At times, it may be helpful to teach them nonverbal attending skills because these skills may help them communicate more efficiently with the sighted.

Additionally, the use of body language may be more difficult to employ when working with the Native American culture, especially in a group setting. Native Americans are often taught to restrain both positive and negative feelings in public so their facial expressions are usually difficult to detect. Native American people have always valued restraint of emotion, considering this a sign of wisdom and maturity.

Native Americans often do not ask questions in public for the following reasons: (1) An intelligent question may draw attention away from the authority and onto oneself which may be seen as showing off (2) A silly question would make one a laughingstock and cause embarrassment (3) Whether the question is good or bad, it will disturb the authority's power or suggest that he or she is unclear, which goes against the tradition of being respectful to the senior.

Also, Native Americans place high value on silence. They may wait up to 30 seconds to ask a question after being invited to do so. This is a longer time span than most North Americans are comfortable with. Native Americans value thinking and reflecting before responding, so counselors may sit with them for extended period of time in silence as they sort out issues. Thus, it is important for counselors to be comfortable with silence as well as verbals when it comes to attending behavior so that they can better serve their clients.

consider it warm and caring. Verbal underlining is another concept that relates to vocal qualities. It has been found through research that, as people speak, they often utilize verbal underlining to give louder volume and increased vocal emphasis to certain words or phrases. Thus, key words that a client underlines via volume and emphasis are often topic of particular importance. The counselor should be aware of and look for these key words in order to better understand the perceptions and concerns of the client.

Awareness of others and one's own changes in vocal qualities enhances the ability to attend to others and hear their stories. Timing of vocal changes can sometimes indicate comfort or discomfort depending on the situation. Speech hesitations and breaks are another signal, often indicating confusion or stress. Also, clearing of the throat may indicate that words are not coming easily.

A counselor's ability to stay with the client's topic is critical in verbal tracking. Encouraging clients to fully elaborate their stories is key because they will often shift topics when they are uncomfortable. Cultural differences will often appear here as well due to the different backgrounds and varying perceptions of what is appropriate in different cultures. In middle-class U.S. communication, direct tracking is most appropriate, but in some Asian cultures such direct verbal follow-up may be considered rude or intrusive.

Selective attention is a type of verbal tracking that counselors and interviewers need to be especially aware of. It involves listening to some things and ignoring others. Over time, we have developed patterns of listening that have enabled us to hear some topics more clearly than others, while toning out or ignoring other topics that we have learned are unnecessary. It is essential for counselors to recognize their patterns of selective attention so that no client issues are unnecessarily lost or ignored.

Just as cultural differences in eye contact exist, body language patterns differ as well. A comfortable conversational distance for many North Americans is slightly more than arm's length, and the English prefer even greater distance. Many Latin people often prefer half that distance and those from the Middle East may talk practically eyeball to eyeball. As a result, the slightly forward leaning recommended for counselors and interviewers in the U.S. is not going to be appropriate all the time. A natural, relaxed body style will most likely be effective, but counselors must be prepared to adapt and flex according to the individual he or she is speaking with.

Changes in body language convey potentially uncomfortable issues, just as shifts in eye contact do. A person may move forward when interested and away when bored or frightened. Counselors and interviewers should pay attention to body language in both the client and themselves. For example, counselors should be careful not to move away while clients are sharing emotional experiences because such an action might wrongly convey to clients that the counselor is not interested in them or in what they are saying.

Authenticity is vital to the way counselors communicate. Whether visuals and eye contact, vocal qualities, verbal tracking, or attentive body language is used by a counselor, it is essential that he or she is being a real person in a real relationship. These skills should not seem unnatural or forced. While the "three V's and B" are helpful in communicating, it is extremely important that the authentic personality of the counselor is not lost because that too facilitates relationships and communication with clients.

The Usefulness of Silence

Counseling and interviewing are talking professions, but sometimes the most useful action to a client is silent support. Beginning counselors may often find it hard to sit and wait while clients think through what they want to say. A client may be in tears and the counselor's first reaction may be to comfort them. However, the best support may be simply being with the person and not saying a word.

When a counselor feels uncomfortable with silence it is important for him or her to look to the client to determine the appropriate course of action. If the client appears comfortable with the silence, counselors should draw from his or her ease and join the silent break. If the client seems disquieted or uncomfortable with the silence, then use the "three V's and B" of attending behavior discussed previously and ask a question or make a relevant comment.

Finally, it is important that the client be allowed to do most of the talking in the session or interview. Obviously clients cannot talk while the counselor is talking, so silence can create excellent opportunities for increased client sharing that will ultimately facilitate the success of the counselor-client relationship.

Appendix B

Counseling Psychology

Intentionality in Counseling

Facilitating client development is a key aspect of counseling that requires counselors to blend their personal style of helping with their acquired interviewing skills. Intentionality and cultural intentionality encourages the counselor to be his or her self, but also emphasizes that reaching a wide variety of clients requires flexibility and a constant willingness to learn new ways of interacting with clients.

Clients come to counselors with multiple issues and concerns. The counselor has many possible methods of action, but is important that he or she listens first and begins problem solving later. How you listen and respond may be more important than attempting to solve the client's problem right away.

Beginning interviewers are often eager to find the "right" answer for the client. In fact, they are often so eager that they often give quick patch-up advice that is inappropriate. For example, it is possible that cultural factors such as ethnicity, race, gender, lifestyle, or religious orientation may unknowingly determine the counselor's response and plan of treatment for the client, which can have detrimental effects.

Intentional interviewing is concerned not with which single response is correct, but with how many potential responses may be helpful. Intentionality is a core goal of effective interviewing within the counseling profession.

Intentionality is acting with a sense of capability and deciding from among a range of alternative actions. The intentional individual has more than one action, thought, or behavior to choose from in responding to changing life situations. The intentional individual can generate alternatives in a given situation and approach a problem from different vantage points, using a variety of skills and personal qualities, adapting styles to suit different individuals and cultures.

The culturally intentional interviewer remembers a basic rule of helping: if something doesn't work, don't try more of the same—try something different!

Cultural Intentionality in Counseling

One of the critical issues in interviewing is that the same skills may have different effects on people from varying cultural backgrounds. Intentional interviewing requires an awareness that cultural groups each have different patterns of communication. Eye contact patterns differ, for example. In the U.S. culture, middle-class patterns call for rather direct eye contact, but in some cultural groups direct eye contact is considered rude and intrusive. Some find the rapid-fire questioning techniques of many North Americans offensive. Many Spanish-speaking groups have more varied vocal tones and sometimes a more rapid speech rate than do English-speaking people.

It is also important to remember that the word culture can be defined in many ways. Religion, class, ethnic background (for example, Irish American and African American), gender, and lifestyle differences, as well as the degree of a client's developmental or physical disability, also represent cultural differences. There is also a youth culture, a culture of those facing imminent death through AIDS or cancer, and a culture of the aging. In effect, any group that differs from the "mainstream" of society can be considered a subculture. All of us at times are thus part of many cultures that require a unique awareness of the group experience. In fact, increasingly, many people suggest that diversity is what constitutes the mainstream. This may suggest that respecting and honoring our differences is what will bring us together as one people.

Furthermore, individuals differ as much as or more than cultures. Counselors need to attune their responses to the unique human being that is before them. Lack of intentionality

shows in the interview when the counselor persists in using only one skill, one definition of the problem, or one theory of interviewing, even when that theory isn't working.

Intentional Competence

Closely allied to intentionality is intentional competence, which is associated with predictability and the anticipated consequences of what a counselor says in a session with a client. Intentional competence adds another dimension to many of the skills employed by counselors.

Some examples of anticipated consequences are: when asking an open-ended question, the anticipated result is that the client will talk more in-depth about a topic; when reflecting a client's feeling, expect clients to acknowledge and deal with their feelings more fully; and when confronting a client about discrepancies, the consequence is likely to be that the client will seek to resolve such issues.

Even though counselors can make intentional predictions about what will happen as a result of using certain skills, it is important to remember that clients may vary in their responses to the same skills. A counselor may ask an open-ended question and find that some clients simply do not want to answer completely. A counselor may reflect a client's feelings but learn that the client is not yet ready to explore his or her emotions. In short, the intentional prediction may not always "work."

Intentionality, as discussed earlier, stresses the importance of having more than one action, thought, or behavior to choose from in changing life situations. True intentional competence demands more than predictability; it also requires flexibility, the ability to change direction and skills, and the capacity to be with the client in new ways.

Attending Behavior in the Interview:

The Three V's and B: Visuals, Vocals, Verbals, and Body Language

Utilizing the skills of attending behavior is critical to counselor-client interaction. The counselor needs to use the "three V's of attending plus attentive body language (+B)." These skills are very effective when used within an individually and culturally appropriate framework.

Cultural differences in eye contact abound. Direct eye contact is considered a sign of interest in European-North American middle-class culture. However, even in that culture, a person often maintains more eye contact while listening and less while talking. Furthermore, when a client is uncomfortable talking about a topic, it may at times be better for the counselor to avoid eye contact. Research indicates that some African Americans in the U.S. may have reverse patterns; that is, they may look more when talking and slightly less when listening. Among some Native American and Latin groups, eye contact by the youth is a sign of disrespect. Imagine the problems this may cause if a teacher or counselor says to a youth, "Look at me!" when this directly contradicts basic cultural values. Some cultural groups (for instance, some Native American, Inuit, or Aboriginal Australian groups), generally avoid eye contact, especially when talking about serious subjects.

Counselors need to notice breaks in eye contact as well. Clients often tend to look away when thinking carefully or discussing topics that particularly distress them. Also, counselors can use eye contact breaks to indicate to clients whether a topic is appropriate or if they are dwelling too much on a particular topic. When an issue is especially interesting to clients, their pupils will often dilate. On the other hand, if a topic is uncomfortable or boring their pupils may contract.

The voice is an instrument that communicates much of a person's feelings he or she might have toward another person or situation. Changes in pitch, volume, or speech rate convey similar things that changes in eye contact or body language do. It is important to remember that different people will respond to the same voice in varying ways. This is because people differ in their reactions to the same stimulus. While some may find a voice boring, still others may

consider it warm and caring. Verbal underlining is another concept that relates to vocal qualities. It has been found through research that, as people speak, they often utilize verbal underlining to give louder volume and increased vocal emphasis to certain words or phrases. Thus, key words that a client underlines via volume and emphasis are often topic of particular importance. The counselor should be aware of and look for these key words in order to better understand the perceptions and concerns of the client.

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Attending behaviors (visuals, vocals, verbals, and body language) all may require modification when working with individuals from different cultures. For example, when working with people who are disabled, counselors must focus on the person, not the disability. Thus, think of a person with hearing loss rather than someone who is "hearing impaired," a person with AIDS rather than an AIDS victim, a person with a physical disability rather than a

“physically handicapped” person. So-called handicaps are often societal and environmental rather than personal.

For example, eye contact is so central to the sighted that counselors often find it very demanding to work with clients who are blind or partially sighted. Some of these clients may not look at their counselor as they speak, so such clients are usually more aware of vocal tone. People who are blind from birth may have unique patterns of body language. At times, it may be helpful to teach them nonverbal attending skills because these skills may help them communicate more efficiently with the sighted.

Additionally, the use of body language may be more difficult to employ when working with the Native American culture, especially in a group setting. Native Americans are often taught to restrain both positive and negative feelings in public so their facial expressions are usually difficult to detect. Native American people have always valued restraint of emotion, considering this a sign of wisdom and maturity.

Native Americans often do not ask questions in public for the following reasons: (1) An intelligent question may draw attention away from the authority and onto oneself which may be seen as showing off (2) A silly question would make one a laughingstock and cause embarrassment (3) Whether the question is good or bad, it will disturb the authority's power or suggest that he or she is unclear, which goes against the tradition of being respectful to the senior.

Also, Native Americans place high value on silence. They may wait up to 30 seconds to ask a question after being invited to do so. This is a longer time span than most North Americans are comfortable with. Native Americans value thinking and reflecting before responding, so counselors may sit with them for extended period of time in silence as they sort out issues. Thus, it is important for counselors to be comfortable with silence as well as verbals when it comes to attending behavior so that they can better serve their clients.

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Appendix C

Economics

The Scope of Microeconomic Theory

The prefix *micro-* in microeconomics comes from the Greek word *mikros*, meaning small. It contrasts with macroeconomics, the other branch of economic theory. Macroeconomics deals primarily with aggregates, such as the total amount of goods and services produced by society and the absolute level of prices. It studies the national and global economy and how economic aggregates grow and fluctuate. The goal of macroeconomics is to explain average prices and total employment, income, and production.

However, microeconomics analyzes the behavior of “small” units: consumers, workers, savers, business managers, firms, individual industries and markets, and so on. Microeconomics, however, is not limited to “small” issues. Instead, it reflects the fact that many “big” issues can best be understood by recognizing that they are composed of numerous smaller parts. Just as much of our knowledge about chemistry and physics is built on the study of molecules, atoms, and subatomic particles, much of our knowledge of economics is based on the study of individual behavior.

Thus, microeconomics is the study of decisions of people and businesses and the interactions of those decisions in markets. The goal of microeconomics is to explain the prices and quantities of individual goods and services. Microeconomics also studies the effects of government regulation and taxes on the prices and quantities of individual goods and services. For example, microeconomics studies the forces that determine the prices of cars and the amounts of cars produced and sold.

Individuals are the fundamental decision makers in any society. Their decisions, in the aggregate, define the economic environment of that society. Consumers decide how much of various goods to purchase, workers decide what jobs to take, and business people decide how many workers to hire and how much output to produce. Microeconomics encompasses the factors that influence these choices and the way these innumerable small decisions merge to determine the workings of the entire economy. Because prices have important effects on these individual decisions, microeconomics is frequently called price theory.

It is important to note that macroeconomics and microeconomics, while having different focuses, utilize a common set of tools and ideas. Some problems have both a macroeconomic and microeconomic dimension. An example is the invention of video games and the growth of the market in multimedia products. Microeconomics explains the effects of this invention on the price of games, the quality of games produced, and the number of people employed in making these games. Macroeconomics explains the effects of this invention on total spending and jobs in the economy as a whole.

The Nature and Role of Theory

In disciplines from physics to political science, using a theory to make sense of a complex reality is essential. Facts do not always “speak for themselves.” In economics, facts may describe a historical episode, but facts can never explain why the episode occurred or how things would have been different had, for example, the government pursued another policy. Moreover, facts can never demonstrate how, for instance, a change in agricultural price supports will affect agricultural production next year. For purposes of explanation or prediction, we must employ a theory that shows how facts are related to one another. Theory in economics, as in other sciences, is based on certain assumptions. For example, economics assume that firms strive to maximize profit. Based on this assumption, the economic theory of the firm explains

what mix of steel and plastic firms such as Toyota and General Motors (GM) employ in production as well as what amount of cars and trucks they produce. The theory also explains how Toyota's and GM's desired input mixes and final output levels are affected by changes in, say, the price of steel or the price received per car sold. Thus, economic theory can be used to predict as well as to explain real-world outcomes.

How do we know if a theory, whether it be in economics, physics, or political science, is a "good" theory? Basically, a theory is considered to be valid and useful if it successfully explains and predicts the phenomena that it is intended to explain and predict. In keeping with this test, theories are continually stacked up against real-world data. Depending on how well a theory matches the data, the theory is maintained, refined, or sometimes even discarded (perhaps in favor of a competing explanation). The continual process of testing theories against real-world data is critical to the advancement of any science, not just economics.

In testing a theory, it is important to note that imperfection tends to be the norm. That is, "good" theories typically do not explain the observed data perfectly nor are the assumptions upon which they are based entirely realistic. For example, consider the calorie theory, one accepted by millions of people. The calorie theory holds that a person's weight depends on the number of calories consumed per day: the more calories ingested, the heavier the person will be. The calorie theory predicts that to lose weight, a person should cut his or her calorie intake. Is this a valid and useful theory? Consider two criticisms: First, the calorie theory is based on assumptions that are not completely realistic. That is, no one has ever seen a calorie, much less observed the human body convert it into weight. Second, the theory is not perfect. Reducing your calorie intake will not necessarily make you thin. Other factors, such as heredity, exercise, and metabolism also influence a person's weight, other than calorie intake.

Does this mean that people who count calories are wrong? Not at all. In fact, the calorie theory is quite useful for millions of weight watchers around the world. For them, the general relationship between calories and weight tends to hold and becomes even stronger once the calorie theory is refined to account for other factors such as heredity, exercise, metabolism, and so forth.

Such is the case with economics. While firms may not appear to maximize profit (think about Amazon.com or Biogen), and refinements accounting for special features of particular markets may be necessary (long-run versus short-run profitability in industries where firms must make substantial up-front research and development investments), the economic theory of the firm based on the assumption of profit maximization successfully explains and predicts a wide range of real-world phenomena. Thus the theory is useful to both business managers and public policymakers.

Markets

In ordinary speech, market means a place where people buy and sell goods such as fish, meat, fruits, and vegetables. In economics, however, market has a more general meaning. A market is any arrangement that enable buyers and sellers to get information and to do business with one another. An example is the market in which oil is bought and sold—the world oil market. It is a network of oil producers, oil users, whole-salers, and brokers who buy and sell the product. There are two main types of markets: goods markets and factor markets. Goods markets are those in which goods and services are bought and sold. Factor markets are those in which factors of production are bought and sold. These factors of production are the economy's productive resources, and they are categorized into four types: labor, land, capital, and entrepreneurial ability. Labor is the time and effort that people devote to producing goods and services. It is rewarded with wages. Land is all the natural resources used to produce goods and

Box 1.1 Assumptions about Market Participants

Economists make three basic assumptions about buyers and sellers in markets. First, market participants are presumed to be goal-oriented, that is, interested in fulfilling their own, personal goals. For example, the Emir of Kuwait may desire a personal jet and advanced medical care for the people of his country. Former basketball star Michael Jordan might long for greater privacy and the opportunity to play golf more.

The assumption of goal-oriented behavior is often taken to indicate that individuals are self-interested. This assumption, however, does not imply that market participants care only about their own pocketbooks. As economists use this term, the behavior of Mother Teresa could be accurately described as goal-oriented. Although Mother Teresa's actions clearly indicated that she had little interest in worldly possessions, they did reflect her own personal desire to help the poor in Calcutta. Thus, the assumption of goal-oriented behavior does not rule out altruistic goals.

The second assumption that economists make is that market participants engage in rational behavior, meaning that their behaviors are based on a careful, deliberative process that weighs expected benefits and costs. For example, we presume that Toyota's decision to build a car production plant in the United States is the outcome of careful deliberation that weighs the expected costs and benefits. We presume an individual buys a new home based on knowledge of its market value and an honest appraisal of what he or she can afford.

The third and most important assumption made by economists about market participants is that they confront scarce resources. Scarce resources involve the presence of insufficient time, money, or other resources for individuals to satisfy all of their desires. For example, there is simply not enough time, money, or other resources for a consumer to satisfy all of his or her desires. Most economists argue that human beings have relatively limitless desires, and that no matter how wealthy individuals become, resources will never be plentiful enough to ensure that all of their desires can be fulfilled.

Thus, if individuals rationally pursue their goals but have limited resources with which to pursue them, choices must be made. Specifically, one must decide which goal to strive for and how far they will go to reach it. Microeconomics explores this process of making choices subject to resource constraints.

services. The return to land is rent. Capital is all the equipment, buildings, tools, and other manufactured goods used to produce other goods and services. The return to capital is interest. Entrepreneurial ability is a special type of human resource that organizes the other three factors of production, makes business decisions, innovates, and bears business risk. Entrepreneurship is rewarded with profit.

Households and firms make decisions that result in the transactions in the goods markets and factors markets that drive an economy. Households decide how much of their labor, land, and capital to sell or rent in factor markets. They receive incomes in the form of wages, rent, interest, and profit. Households also decide how to spend their incomes on goods and services produced by firms. Firms decide the quantities of factors of production to hire, how to use them to produce goods and services, what goods and services to produce, and in what quantities. They sell their outputs in goods markets.

Market Analysis and Real Versus Nominal Prices

Most of microeconomics involves the study of how individual markets function. Markets involve the interplay of all potential buyers and sellers of a particular commodity or service. Most economic issues concern the ways in which particular markets function. For example, an economist's wages and earnings are likely to be higher than those of a gas station attendant but

lower than those of a doctor. This situation reflects the workings of three labor markets.

To analyze markets, we concentrate on factors having the greatest influence on the decisions of buyers and sellers. Prices receive special attention. Prices result from market transitions, but they also strongly influence the behavior of buyers and sellers in every market.

In microeconomics, the term price always refers to the relative or real price of the item. The nominal price, or absolute price, by itself does not tell us how costly an item really is. Is a 10-cent cup of coffee expensive? In 1900 it would have been outrageously expensive; today it would be a bargain. The problem with nominal prices is that the dollar is an elastic yardstick. The real price of a good reflects its nominal price adjusted for the changing value of money. Thus, the real price takes into account the variable value of money, while the nominal price does not.

Opportunity Cost

Whenever you pursue one goal, you limit the extent to which your other goals can be satisfied with your scarce resources. For example, suppose that after getting your bachelor's degree and working for a few years, you enroll in a full-time, two-year MBA program. What would the cost of this choice be? You would incur some explicit costs, such as the tuition, books, and parking fees. The dollars spent on such items could have been devoted to the pursuit of other goals. You would also face implicit costs associated with your own use of time. For example, instead of going to business school, you could have continued working and making \$40,000 per year. The \$40,000 in annual foregone wages would be an implicit cost associated with pursuing an MBA. In other words, the time and effort devoted to pursuing the MBA could have been used to generate \$40,000 in each of the two years that you attend graduate business school. Thus, explicit costs are the money used in the pursuit of a goal that could otherwise have been spent on an alternative objective, and implicit costs are the costs associated with the individual's use of his or her own time.

The concepts of explicit and implicit costs also apply to the production side of a market. For firms making production decisions, explicit costs are those that are usually counted as costs in conventional accounting statements. They include payroll, raw materials, insurance, electricity, interest on debt, and so on. Implicit costs reflect the fact that a firm's resources can be allocated to other uses—AOL Time Warner, for example, can reallocate its resources from magazine publishing to the production and distribution of interactive video products.

The sum of implicit and explicit costs associated with using some resource in a particular way is defined as the resource's economic cost or opportunity cost. The concept of opportunity cost forces us to recognize that costs are not just money payments but also sacrificed alternatives. Where more than two uses for a resource exist and the resource can be devoted to only one use at a time, the opportunity cost of using the resource in a particular way is the value of the resource in its best alternative use. Economists use the term opportunity cost to emphasize that making choices in the face of scarcity involves a cost. Thus, the opportunity cost of any action is the best alternative foregone.

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Such is the case with economics. While firms may not appear to maximize profit (think about Amazon.com or Biogen), and refinements accounting for special features of particular markets may be necessary (long-run versus short-run profitability in industries where firms must make substantial up-front research and development investments), the economic theory of the firm based on the assumption of profit maximization successfully explains and predicts a wide range of real-world phenomena. Thus the theory is useful to both business managers and public policymakers.

Markets

In ordinary speech, market means a place where people buy and sell goods such as fish, meat, fruits, and vegetables. In economics, however, market has a more general meaning. A market is any arrangement that enable buyers and sellers to get information and to do business with one another. An example is the market in which oil is bought and sold—the world oil market. It is a network of oil producers, oil users, whole-salers, and brokers who buy and sell the product. There are two main types of markets: goods markets and factor markets. Goods markets are those in which goods and services are bought and sold. Factor markets are those in which factors of production are bought and sold. These factors of production are the economy's

productive resources, and they are categorized into four types: labor, land, capital, and entrepreneurial ability. Labor is the time and effort that people devote to producing goods and services. It is rewarded with wages. Land is all the natural resources used to produce goods and services. The return to land is rent. Capital is all the equipment, buildings, tools, and other manufactured goods used to produce other goods and services. The return to capital is interest. Entrepreneurial ability is a special type of human resource that organizes the other three factors of production, makes business decisions, innovates, and bears business risk. Entrepreneurship is rewarded with profit.

Households and firms make decisions that result in the transactions in the goods markets and factors markets that drive an economy. Households decide how much of their labor, land, and capital to sell or rent in factor markets. They receive incomes in the form of wages, rent, interest, and profit. Households also decide how to spend their incomes on goods and services produced by firms. Firms decide the quantities of factors of production to hire, how to use them to produce goods and services, what goods and services to produce, and in what quantities. They sell their outputs in goods markets.

Economists make three basic assumptions about buyers and sellers in markets. First, market participants are presumed to be goal-oriented, that is, interested in fulfilling their own, personal goals. For example, the Emir of Kuwait may desire a personal jet and advanced medical care for the people of his country. Former basketball star Michael Jordan might long for greater privacy and the opportunity to play golf more.

The assumption of goal-oriented behavior is often taken to indicate that individuals are self-interested. This assumption, however, does not imply that market participants care only about their own pocketbooks. As economists use this term, the behavior of Mother Teresa could be accurately described as goal-oriented. Although Mother Teresa's actions clearly indicated that she had little interest in worldly possessions, they did reflect her own personal desire to help the poor in Calcutta. Thus, the assumption of goal-oriented behavior does not rule out altruistic goals.

The second assumption that economists make is that market participants engage in rational behavior, meaning that their behaviors are based on a careful, deliberative process that weighs expected benefits and costs. For example, we presume that Toyota's decision to build a car production plant in the United States is the outcome of careful deliberation that weighs the expected costs and benefits. We presume an individual buys a new home based on knowledge of its market value and an honest appraisal of what he or she can afford.

The third and most important assumption made by economists about market participants is that they confront scarce resources. Scarce resources involve the presence of insufficient time, money, or other resources for individuals to satisfy all of their desires. For example, there is simply not enough time, money, or other resources for a consumer to satisfy all of his or her desires. Most economists argue that human beings have relatively limitless desires, and that no matter how wealthy individuals become, resources will never be plentiful enough to ensure that all of their desires can be fulfilled.

Thus, if individuals rationally pursue their goals but have limited resources with which to pursue them, choices must be made. Specifically, one must decide which goal to strive for and how far they will go to reach it. Microeconomics explores this process of making choices subject to resource constraints.

Market Analysis and Real Versus Nominal Prices

Most of microeconomics involves the study of how individual markets function. Markets involve the interplay of all potential buyers and sellers of a particular commodity or service. Most economic issues concern the ways in which particular markets function. For example, an economist's wages and earnings are likely to be higher than those of a gas station attendant but lower than those of a doctor. This situation reflects the workings of three labor markets.

To analyze markets, we concentrate on factors having the greatest influence on the decisions of buyers and sellers. Prices receive special attention. Prices result from market transitions, but they also strongly influence the behavior of buyers and sellers in every market.

In microeconomics, the term price always refers to the relative or real price of the item. The nominal price, or absolute price, by itself does not tell us how costly an item really is. Is a 10-cent cup of coffee expensive? In 1900 it would have been outrageously expensive; today it would be a bargain. The problem with nominal prices is that the dollar is an elastic yardstick. The real price of a good reflects its nominal price adjusted for the changing value of money. Thus, the real price takes into account the variable value of money, while the nominal price does not.

Opportunity Cost

Whenever you pursue one goal, you limit the extent to which your other goals can be satisfied with your scarce resources. For example, suppose that after getting your bachelor's degree and working for a few years, you enroll in a full-time, two-year MBA program. What would the cost of this choice be? You would incur some explicit costs, such as the tuition, books, and parking fees. The dollars spent on such items could have been devoted to the pursuit of other goals. You would also face implicit costs associated with your own use of time. For example, instead of going to business school, you could have continued working and making \$40,000 per year. The \$40,000 in annual foregone wages would be an implicit cost associated with pursuing an MBA. In other words, the time and effort devoted to pursuing the MBA could have been used to generate \$40,000 in each of the two years that you attend graduate business school. Thus, explicit costs are the money used in the pursuit of a goal that could otherwise have been spent on an alternative objective, and implicit costs are the costs associated with the individual's use of his or her own time.

The concepts of explicit and implicit costs also apply to the production side of a market. For firms making production decisions, explicit costs are those that are usually counted as costs in conventional accounting statements. They include payroll, raw materials, insurance, electricity, interest on debt, and so on. Implicit costs reflect the fact that a firm's resources can be allocated to other uses—AOL Time Warner, for example, can reallocate its resources from magazine publishing to the production and distribution of interactive video products.

The sum of implicit and explicit costs associated with using some resource in a particular way is defined as the resource's economic cost or opportunity cost. The concept of opportunity cost forces us to recognize that costs are not just money payments but also sacrificed alternatives. Where more than two uses for a resource exist and the resource can be devoted to only one use at a time, the opportunity cost of using the resource in a particular way is the value of the resource in its best alternative use. Economists use the term opportunity cost to emphasize that making choices in the face of scarcity involves a cost. Thus, the opportunity cost of any action is the best alternative foregone.

Appendix E

Counseling Psychology Comprehension Test

1. Intentionality requires counselors to
 - a. be flexible and generate many potential responses for the client.
 - b. have a specific goal in mind during a session with a client.
 - c. always use the same approaches with every client.
 - d. avoid seeing the situation from the client's point of view.
2. Social class, age, gender, and religion are examples of
 - a. counseling groups.
 - b. verbals.
 - c. cultures.
 - d. counseling categories.
3. Intentional competence does not involve
 - a. predicting client responses that will occur with the use of different skills.
 - b. knowing and utilizing more than 10 theories.
 - c. anticipating consequences of counseling interventions.
 - d. flexibility and the ability to adapt to client needs.
4. The expression of emotion in public in Native American culture involves
 - a. restraint of positive of emotion only.
 - b. restraint of negative emotion only.
 - c. no restraint of emotion.
 - d. restraint of both positive and negative emotion.
5. Which of the following is not characteristic of Native Americans?
 - a. They value silence.
 - b. They avoid asking questions in public so as not to draw attention to themselves.
 - c. They ask questions in public as a sign of respect.
 - d. They are afraid of asking a silly question and being embarrassed
6. Which of the following would be an appropriate way for a counselor to view a client?
 - a. as a physically handicapped person.
 - b. as a blind person.
 - c. as an AIDS victim.
 - d. as a person with a hearing impairment.
7. Which of the following statements about body language is true?
 - a. A comfortable conversational distance for North Americans is less than an arm's length.
 - b. The English prefer a conversation that is practically eyeball to eyeball.
 - c. A comfortable conversational distance for many Latin people is about half an arm's length.
 - d. Many people from the Middle East prefer to have over an arm's length between themselves and the person with whom they are speaking.

8. Silence in a counseling session should be
 - a. avoided at all costs.
 - b. easy for beginning counselors to utilize.
 - c. used only when the client is comfortable with it.
 - d. used to show clients that the counselor is upset with them.

9. When people give louder volume and increased emphasis to certain words and phrases as they speak, it is known as
 - a. vocal emphasis.
 - b. verbal underlining.
 - c. verbal highlighting.
 - d. vocal toning.

Appendix F

Economics Comprehension Test

1. The primary decision makers that define the economic environment in any society are
 - a. businesses
 - b. governments
 - c. individual consumers
 - d. prominent industries
2. Economic theory is
 - a. used to predict real world outcomes.
 - b. helpful in explaining events in the real world.
 - c. measured against real world data.
 - d. all of the above.
3. The two main types of markets are goods markets and
 - a. capital markets
 - b. factor markets
 - c. labor markets
 - d. money markets.
4. According to the text, which of the following is an assumption economists make about market participants (buyers and sellers)?
 - a. They are driven by goals.
 - b. They strive to maximize profit.
 - c. They are driven to help others meet their goals.
 - d. They strive to save their wealth rather than spend it.
5. Economists assume that humans
 - a. will never have all of their desires met.
 - b. will never have all of their desires met, unless they are wealthy.
 - c. have a limited number of wants and desires.
 - d. usually feel that they have most of the things they desire.
6. An example from the text stated that Toyota is expected to build a new car production plant after careful deliberation. Which expectation of market participants is best demonstrated by this example?
 - a. Market participants are goal-oriented.
 - b. Market participants are driven to help others meet their goals.
 - c. Market participants strive to maximize profit.
 - d. Market participants engage in rational behavior.
7. The real price of an item
 - a. takes into account the changing value of money.
 - b. does not take into account the changing value of money.
 - c. does not tell us how costly an item really is.
 - d. is equivalent to the nominal price of that same item.

8. If Ben quits his job to go back to college and earn his degree, which of the following would be an implicit cost for him?
- a. tuition
 - b. school supplies
 - c. foregone wages
 - d. textbooks
9. Opportunity cost emphasizes the importance of
- a. sacrificed alternatives.
 - b. bills and fees.
 - c. labor costs.
 - d. seizing opportunities.

Appendix G

Survey

“The Role of Text Characteristics in Reading”

Please note that these questions refer to “text boxes,” which are sections of text outlined by a box and placed in a body of text. Please refer to the attached sheet for an example of a text box that will help you answer the following questions.

Please answer the following questions honestly and completely. Your comments and thoughts are greatly appreciated so please feel free to elaborate and include additional information.

1. In general, do you usually read the text boxes in your textbooks? Yes No
 - a. If yes, do you read them in all textbooks or just in some? Which ones? Why?
 - b. If no, why don't you read the text boxes?
2. Did you read the text boxes in the texts used in this experiment? Why or why not?

Text Box Example

Box 1.1 Multicultural Considerations

Attending behaviors (visuals, vocals, verbals, and body language) all may require modification when working with individuals from different cultures. For example, when working with people who are disabled, counselors must focus on the person, not the disability. Thus, think of a person with hearing loss rather than someone who is “hearing impaired,” a person with AIDS rather than an AIDS victim, a person with a physical disability rather than a “physically handicapped” person. So-called handicaps are often societal and environmental rather than personal.

For example, eye contact is so central to the sighted that counselors often find it very demanding to work with clients who are blind or partially sighted. Some of these clients may not look at their counselor as they speak, so such clients are usually more aware of vocal tone. People who are blind from birth may have unique patterns of body language. At times, it may be helpful to teach them nonverbal attending skills because these skills may help them communicate more efficiently with the sighted.

Additionally, the use of body language may be more difficult to employ when working with the Native American culture, especially in a group setting. Native Americans are often taught to restrain both positive and negative feelings in public so their facial expressions are usually difficult to detect. Native American people have always valued restraint of emotion, considering this a sign of wisdom and maturity.

Native Americans often do not ask questions in public for the following reasons: (1) An intelligent question may draw attention away from the authority and onto oneself which may be seen as showing off (2) A silly question would make one a laughingstock and cause embarrassment (3) Whether the question is good or bad, it will disturb the authority's power or suggest that he or she is unclear, which goes against the tradition of being respectful to the senior.

Also, Native Americans place high value on silence. They may wait up to 30 seconds to ask a question after being invited to do so. This is a longer time span than most North Americans are comfortable with. Native Americans value thinking and reflecting before responding, so counselors may sit with them for extended period of time in silence as they sort out issues. Thus, it is important for counselors to be comfortable with silence as well as verbals when it comes to attending behavior so that they can better serve their clients.

consider it warm and caring. Verbal underlining is another concept that relates to vocal qualities. It has been found through research that, as people speak, they often utilize verbal underlining to give louder volume and increased vocal emphasis to certain words or phrases. Thus, key words that a client underlines via volume and emphasis are often topic of particular importance. The counselor should be aware of and look for these key words in order to better understand the perceptions and concerns of the client.

Awareness of others and one's own changes in vocal qualities enhances the ability to attend to others and hear their stories. Timing of vocal changes can sometimes indicate comfort or discomfort depending on the situation. Speech hesitations and breaks are another signal, often indicating confusion or stress. Also, clearing of the throat may indicate that words are not coming easily.

A counselor's ability to stay with the client's topic is critical in verbal tracking. Encouraging clients to fully elaborate their stories is key because they will often shift topics when they are uncomfortable. Cultural differences will often appear here as well due to the different backgrounds and varying perceptions of what is appropriate in different cultures. In middle-class U.S. communication, direct tracking is most appropriate, but in some Asian cultures such direct verbal follow-up may be considered rude or intrusive.